

WHAT IS CLAIMED IS:

1. A connector insertion and removal tool for an electrical system including a circuit board and at least one electrical connector therefor, said tool comprising:

a first portion configured for coupling to a first surface of the circuit board; and

a second portion configured for coupling to said first portion;

wherein at least one of said first portion and said second portion comprises an actuator adapted for movement toward and away from said circuit board to contact at least a portion of said connector.

2. A tool in accordance with claim 1 wherein each of said first portion and said second portion include an actuator adapted for movement toward and away from said circuit board to contact at least a portion of said connector.

3. A tool in accordance with claim 1 wherein the motherboard includes a pin aperture field, said actuator comprising a plurality of extraction pins corresponding to the pin aperture field.

4. A tool in accordance with claim 1 further comprising at least one board guide pin, said guide pin engaged to said first portion on one side of the circuit board and engaged to said second portion on the other side of the circuit board.

5. A tool in accordance with claim 4 wherein said at least one board guide pin comprises a first end having a first threaded portion and a second end having a second threaded portion, said first and second threaded portions different from one another.

6. A tool in accordance with claim 1 further comprising nonconductive sections situated adjacent said actuator, thereby avoiding a conductive path through said tool.

7. A tool in accordance with Claim 1 wherein said at least one of said first portion and said second portion comprises an alignment member configured to position the electrical connector with respect to a pin aperture field in the motherboard.

8. A tool in accordance with claim 1 wherein said at least one of said first portion and said second portion comprises a plurality of modular blocks mounted stationary thereto, and at least one movable block configured to move toward and away from the motherboard.

9. A tool in accordance with claim 1 wherein said at least one said first portion and said second portion comprises a positioning plate configured for sliding engagement with a guide track.

10. A connector insertion and removal tool for an electrical system including a circuit board and at least one electrical connector therefor, said tool comprising:

a first portion configured for coupling to a first surface of the circuit board and comprising a first actuator, said first actuator movable toward said circuit board to disengage the connector from the circuit board, said first actuator movable away from said circuit board to permit engagement of the connector to the circuit board; and

a second portion configured for coupling to said first portion, said second portion extending over a second surface of the circuit board opposite the first surface, said second portion comprising a second actuator, said second actuator movable toward said circuit board to engage the connector to the circuit board, and said actuator block movable away from said circuit board to permit disengagement of the connector from the circuit board.

11. A tool in accordance with claim 10 further comprising a guide pin insertable through the circuit board, said first portion and said second portion engaged to said guide pin on opposite sides of the circuit board.

12. A tool in accordance with claim 11 wherein said first portion comprises a first alignment member for engaging a first portion of said guide pin, and

said second portion comprising a second alignment member for engaging a second portion of said guide pin.

13. A tool in accordance with claim 10 wherein each of said first and second portion comprises modular blocks, at least some of said modular blocks nonconductive.

14. A tool in accordance with claim 10, at least one of said first portion and said second portion comprising a positioning plate, said positioning plate slidably engaged to a guide track to align the connector and the motherboard.

15. A tool in accordance with claim 10 wherein said first actuator comprises an actuator block comprising a plurality of extraction pins.

16. A connector insertion and removal tool for an electrical system including a circuit board and at least one electrical connector therefor, said tool comprising:

a first portion comprising a first plurality of modular blocks, said first plurality of modular blocks comprising a first pair of stationary alignment blocks configured for coupling to a first surface of the circuit board, a first movable actuator block movable toward said circuit board to disengage the connector from the circuit board and movable away from said circuit board to permit engagement of the connector to the circuit board, and at least one first insulative spacer block to prevent completion of a conductive path through the first portion; and

a second portion comprising a second plurality of modular blocks, said second plurality of modular blocks comprising at least a second pair of stationary alignment blocks configured for coupling to said first pair of alignment blocks, a second movable actuator movable toward said circuit board to engage the connector to the circuit board and movable away from said circuit board to permit disengagement of the connector from the circuit board, and at least one second insulative spacer block to prevent completion of a conductive path through the second portion.

17. A tool in accordance with claim 16 further comprising a pair of guide pins, each of said first pair of alignment blocks and said second pair of alignment blocks configured to engage one end of said guide pins.

18. A tool in accordance with claim 16 further comprising a pair of board guide pins, each of said first pair of alignment blocks and said second pair of alignment blocks comprising a pair of alignment members extending therethrough and configured to engage a portion of said guide pins.

19. A tool in accordance with claim 16 wherein said first movable actuator comprises a plurality of extraction pins.

20. A tool in accordance with claim 16 further comprising a pair of guide pins connecting said first portion and said second portion, each of said guide pins having respective first ends having a first threaded portion and a second end having a second threaded portion, said first threaded portion being different from said second threaded portion.

21. A tool in accordance with claim 20 wherein a portion of said first threaded portions is removed, thereby preventing threads of said first threaded portion from engaging a complementary threaded alignment member.